

## Pa. and the Circular Economy: Turning Waste Into Something New

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**The “circular economy” is coming to Pennsylvania. And if recent polling data are correct, it cannot come a moment too soon—and Pennsylvania attorneys and advisers would be well-advised to become acquainted with the coalescing legal and market forces that are driving the transition.**

**By Bernadette M. Rappold | [March 17 2020](#) | [The Legal Intelligencer](#)**

The “circular economy” is coming to Pennsylvania. And if recent polling data are correct, it cannot come a moment too soon – and Pennsylvania attorneys and advisors would be well-advised to become acquainted with the coalescing legal and market forces that are driving the transition.

A 2019 Franklin & Marshall poll found that 68 percent of Pennsylvanians believe the Commonwealth needs to do more to fight climate change. But the General Assembly has been slow to pass laws that will significantly reduce greenhouse gas emissions. Paralleling the federal government, the Commonwealth’s relative inaction has left market forces to step into the gap to begin to compel businesses to embrace the circular economy.

The circular economy marks a departure from the “linear economy,” where resources are extracted, made into products, used and then discarded at the end of their useful lives. Illegal dumping of old cathode-ray TVs – a growing problem in Pennsylvania and an unintended consequence of Act 108, a 2010 law meant to encourage electronics recycling that banned disposal of CRTs in landfills – is a sad testament to that mode of production.

In contrast, in the circular economy, resources are extracted, made into products and then repeatedly re-made into new products, minimizing greenhouse gas emissions and maximizing value. Whether by

transforming waste into energy or new products, employing modular production techniques that facilitate re-use, tightening supply chains, or finding alternatives for toxic chemicals, companies are increasingly heeding customer, shareholder and investor demand to utilize circular economy principles in their operations.

Socially conscious investors now routinely evaluate businesses according to their “ESG” ratings. These “Environmental, Social and Governance” ratings reflect a company’s performance in environmental stewardship, community and workplace fairness, and corporate governance and transparency, among other things.

A veritable cottage industry of ratings organizations has emerged, each jockeying for ascendancy, with predictable results: companies that make ESG disclosures do so inconsistently, making it difficult for investors to meaningfully compare ESG risks.

As a result, academics and investor groups have complained about the lack of ESG standardization and have petitioned the SEC to promulgate regulations that would require publicly-traded companies to disclose ESG risks according to a well-known set of principles (Williams, CA and Fisch, JE. “Petition for a rulemaking on environmental, social, and governance (ESG) disclosure.” October 1, 2018.)

The SEC has not yet promulgated ESG rules or standards, but pundits predict that will change – especially if there is a change in administration next year.

Demand alone has not yet proved sufficient to motivate many Pennsylvania companies to make the change. In late 2019 members of the General Assembly introduced a legislative package, called Zero Waste PA, to force companies, customers and citizens to reduce certain kinds of waste and to update the state’s e-waste recycling law by adopting best practices from other states. (Pennsylvania House Democratic Caucus, Zero Waste PA, [www.pahouse.com/zerowaste](http://www.pahouse.com/zerowaste), last accessed March 1, 2020.)

Zero Waste PA would require bottle and can deposits and impose new fees on certain single-use plastics. It would also ban restaurants from distributing food in polystyrene packaging, impose a deposit on cigarette filters to promote upcycling, and require plastic packaging manufacturers to provide recycling for materials they distribute in Pennsylvania. And the measure would fix certain loopholes in Act 108 – principally by de-linking funding from the weight of goods sold – to promote e-waste recycling in the Commonwealth.

Proponents of the measure have not yet announced the expected greenhouse gas reductions that would likely result from its passage and implementation, but academic studies have conclusively determined that plastic recycling reduces energy use and greenhouse gas emissions. Still, the bill may face an uphill battle in the Republican-controlled General Assembly.

If Zero Waste PA becomes law, it will complement Commonwealth’s 2004 Alternative Energy Portfolio Standard (AEPS), which requires investor-owned utilities and certain retail power providers to derive 18 percent of their power from renewable resources by 2021. Critics charge that the AEPS’s goals are not aggressive enough – and its reliance on so-called “dirty sources” of energy too regressive to meaningfully impact climate change in the Commonwealth and beyond. (Food and Water Watch, Fact Sheet: Pennsylvania Renewable Portfolio Standard Report Card: F, July 2018.)

The legal levers, in Pennsylvania and beyond, remain piecemeal – far from the comprehensive approach circular economy proponents envision. Still, companies in Pennsylvania and elsewhere are adopting the model not only because it seems right, but also because it boosts the bottom line.

Take, for instance, the zero-waste-to-landfill movement, which has at least notable members with plants in Pennsylvania: Cargill (Hazleton) and Volvo Construction Equipment (Shippensburg). The plants either recycle, compost or convert all their manufacturing waste to energy.

While critics charge that the zero-landfill movement relies on the burning of waste as fuel and “greenwashing” (i.e., putting a positive spin on practices that are of dubious environmental benefit) and, diverting waste from landfills has obvious benefits. First, since China banned importation of plastic recyclables in 2018, landfills are rapidly running out of space. Second, and perhaps more importantly, committing to zero-waste-to-landfill requires rethinking and restructuring of manufacturing operations – which often have a side benefit of reducing energy consumption.

Other manufacturers, particularly in the electronics sector, are relying on circular economy principles to breathe new life into products that have reached the end of their useful lives. For example, by retrofitting older MRI scanners with updated electronics and software, manufacturers are expanding the availability of this expensive equipment to communities that previously could not afford it. Because of these efforts, several medical imaging manufacturers have found that retrofitting lower-strength surplus machines with new electronics and software improves image quality – perhaps saving lives in the process.

The circular economy is not confined to the manufacturing sector, however. Increasingly, farmers are finding ways to repurpose agricultural waste. Take, for example, Smithfield’s manure-to-biogas plants in Missouri.

The pork giant partnered with a company called Roeslein Alternative Energy to develop a system that transfers hog wastes from barns to covered lagoons, where naturally-occurring bacteria convert the manure into biogas and a nutrient-rich organic fertilizer. The renewable natural gas produced is among the lowest carbon-intensity fuels ever produced – meaning its production and use reduce greenhouse gases, not simply compared to baselines.

For now, companies that want to utilize the circular economy in their operations must be creative in aligning the state and federal carrots and sticks and forming the partnerships necessary to make the transition. But the transition is happening. And with savvy public policy in the form of laws, regulations and incentives, the circular economy not only makes good policy, but also good economic sense.

### **About the Author:**

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